4:Grajdanzev--173 S-4 (no date) 1942 Formosans -1-2
116, 744, 759, 177.74 Japan
636.74

"In all books and articles published under the auspices of the Japanese government the remarkable successes of the Taiwan government with respect to the health of the population are described, and there is no doubt that improvements took place in Taiwan after 1896—it would be strange if this were not so. More than 300,000 Japanese live there now and their health depends to an important degree upon the health of the surrounding population, especially in case of epidemic diseases. First of all, for the sake of comparison, we give the basic figures for Taiwan and Japan.

Number of Physicians, Dentists, etc. in Japan and in Taiwan, 1936

	Japan	Taiwan	
	1936	1936	1938
Physicians	61,799	1,834	1,983
Dentists	22,072	402	407
Pharmacists (yakusaishi)	28,156	190	213
Nurses	124,402	...	170
Midwives	61,732	1,744	1,796
Per 10,000 of population			
Physicians	8.8	3.4	
Dentists	3.1	0.7	
Pharmacists	4.0	0.3	

4:Grajdanzev--173 S-4 (no date) 1942 Formosans-2
116. 744. 759. 177.74 Japan
636.74

Nurses	17.7	0.3
Midwives	8.8	3.2

Source: Dainippon teikoku nenkan and Taiwan Jijo."

4:Grajdanzev--173-174 S-4 (no date) 1942 Formosans
116, 171, 278, 744, 759

"In the section on education it was shown that Chinese college students from Taiwan prefer to study medicine because this is a profession in which it is relatively easier to establish oneself than in others. Now we see that in spite of this attraction [174] there are two and a half times as many physicians per 10,000 population in Japan as there are in Taiwan. The same is true of midwives, though the need for midwives is greater in Taiwan, where the birth rate is one and a half times as high as in Japan. On the same per capita basis there are four times as many dentists and thirteen times as many pharmacists in Japan as in Taiwan. These and many other figures which could be quoted show that as regards health services Japan is several times better served than Taiwan. And actual conditions are even worse than these figures suggest because the equipment of hospitals is poorer and the physicians rely chiefly on advice and prepared drugs, which are sold by some 6,600 stores as well as 6,700 peddlers."

15: U. S. Navy --26 [9] (no date) 1944 Formosans
116, 732, 759, 548, 874, 177.73 Japanese
636.73

"Schools for the blind, the deaf, and the dumb are maintained at Taihoku and Tainan. In addition to instruction in Braille, pupils are taught various skills, of which the most important are weaving, chiefly of panama hats, and massage. Graduates of the school who have passed the required masseur's examination are licensed to practice, and are assigned districts or routes over which they go every evening from nightfall until midnight, with a whistle or pipe and a tune peculiar to each masseur. They travel, both men and women, in pairs or with a small child or elder person as a guide. Many are not wholly blind, but qualify to practice. Sometimes they work at home or in shops at various tasks during the day, making the evening work as a masseur a supplementary livelihood. Many Chinese hotels or lodging houses have masseurs regularly employed. A certain amount of illegal solicitation for prostitution is carried on by them as well as by the masseurs who travel a regular beat through the city streets."

40: Kirk--20 [2] S-2 (no date) 1941 Formosans
116, 563, 759, 871, 177.56 Japanese

"Theoretically, Japanese and Formosans may attend the middle and high school as well as the university, but in practice the Formosans find many difficulties in their path. The more important positions in business and the professions, with one exception, seem to be held by Japanese exclusively. Medicine is the one profession open to educated Formosans on equal terms with the Japanese."

744 future. Before attaining this goal, however, health education will have to be ex[illegible]ded to all classes of the people, and the economy made stable and prosperous.

IV. MEDICAL FACILITIES AND PERSONNEL

759 Formosa is better provided with professional medical personnel and better equipped with medical and health facilities than the average Asian nation. The latest reports on medical personnel and facilities on the island show the following situation:

LICENSED MEDICAL PERSONNEL -- FORMOSA 1953 *

Physicians	5,443
Herbalists	1,755
Dentists	781
Pharmacists	906
Nurses	877
Midwives	2,310
Dental technicians	234
Druggists	327
Total	12,633

*/ [illegible] Yearbook 1954-55, Taipei [illegible]

MEDICAL FACILITIES -- FORMOSA 1952*

743

Health centers	22
Health stations	343
Provincial Hospitals	13
Provincial Sanitoria	3
Hsien maternity and child health centers	1
Hsien and municipal hospitals	9
Hsien and municipal isolation hospitals	6
Municipal sanitoria	3
Private hospitals	121
Private clinics	3,895
Total	4,416

*/ China Handbook 1952-53, Taipei, 1952, p. 114.

759 The number of licensed physicians alone in 1953 was sufficient to provide one doctor for about every 1900 people.[24] This compares with a ratio of one doctor to every 70,000 people in Indonesia, one to 13,300 in Burma, one to 4,000 in the Philippines, and one to 739 in the United States.[25] Many of the doctors in Formosa have

24. Based on latest population estimate of 10,400,000.

25. Economic Co-operation Administration, Far East Data Book, Nov. 1951, Washington, D.C. These are 1950 figures.

759 been trained in Western countries; the doctors who have not are capable of providing treatment equivalent to that of their Western counterparts except for the administering of the newest medicines. Many of the midwives are well trained and capable of efficient practice in their specialty.

744 Health centers at 22 cities under hsien and provincial administration and health stations at more than 350 townships and villages throughout the island provide a network of medical facilities for the administration of preventive and curative measures on a mass basis.[26] A health center is usually staffed with from 20 to 25 persons, including four or five physicians, three to six nurses, two or three midwives, and one or two laboratory technicians. The health stations are branch units of the health centers; a typical health station has a physician, a nurse, a midwife, a sanitarian, and a technician. Since 1954, the provincial government has established 120 sub-stations in aboriginal villages to extend its health services; a sub-station is permanently staffed with an attendant nurse and a midwife. In addition to out-patient clinical care, the health centers and stations provide obstetrical services, home and school visits by nurses, preventive inoculations, health education, laboratory services, and mobile clinical treatment in neighboring villages. The centers and stations also gather and compile vital statistics. The stations are now an integral part of rural communities and are financially self-supporting.

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26. Mutual Security Mission to China, International Co-operation Administration, op. cit., p. 5. The number of health stations is constantly increasing.

only to furnish their labor and then to give from their limited incomes to pay for the increasingly heavy fertilizer input that insured heavy yields three times a year from the same land. Taiwan was thus transformed into a garden island where only the most venturesome of weeds could grow. Increasing quantities of rice, sugar and tropical products were transported northward to meet the growing food deficits of Japan's increasing population.

PUBLIC HEALTH AND MEDICAL CARE

The Sanitary Bureau of the Police Department was the authority in public health. Administration and enforcement were supported by police power. In the prewar years there were about 2,000 qualified doctors. Many others were trained in Taiwan and given local licenses. At the end of the war there were some 5,000 to 6,000 local doctors, or almost one per thousand population. Since public posts and private practice were limited, many of these doctors were unemployed. In 1948 about 3,000 physicians were registered as engaged in private practice or public service. There were about 600 nurses and numerous midwives. In both these groups the majority were substandard in grade. The number of hospital beds included approximately 1,000 in the capital and perhaps 6,000 on the Island, most of them in small units. In 1948 effective hospital capacity was less than half this prewar level.

Under Japanese control plague was eliminated and cholera and smallpox became rare, although the last two recurred in 1946 to 1947. Tropical diseases are common, malaria in particular. The Japanese had a special malaria service, based on extensive blood examinations, which administered quinine to positive cases. By these means 30 to 40 per cent of the people were examined annually and malaria mortality was reduced by treatment. This suppression improved the health record temporarily, but it did not contribute to permanent amelioration. The program has since been largely discontinued.

THE INCREASE OF THE POPULATION

Population increase paralleled economic expansion. In 1905 there were 3.0 million people on the Island; in 1940, there were 5.9 million. Population thus increased 93 per cent in this 35-year period and virtually all

48: Chen E-4 (no date) 1955 AD1 Formosa AD1

done in Japan was adopted in Taiwan with some slight time lapse. In 1916 a hygienic survey was made in Japan, and five years later, in 1921, the same project was adopted in Taiwan. Between 1922 and 1925, and also from 1926 to 1928, an extensive hygienic survey was carried out in various parts of the island. After the results were published the planning of sanitary works was mostly based on the data of the survey.

The prevention of trachoma was started around 1926, and was most active in the 1930's. The prevention of tuberculosis began from 1932. The Association for the Prevention of Tuberculosis was organized in 1934, Regulations for the Prevention of Tuberculosis were enacted in 1938, Tuberculosis Prevention Day was initiated in 1939, and a sanatorium was constructed in most prefectures, most of them being completed in 1942-43. These activities were quite effective, and the death rate from tuberculosis declined after 1938. (cf. Fig. 11, line D.) Activities of tuberculosis prevention were started in the U.S. in 1890, and as a result, deaths from tuberculosis declined sharply. It has been pointed out by a social scientist that, though the improvement in living conditions will lower the death rate from tuberculosis, community preventive activity is also very significant (20: p. 631). It is interesting to note that, this was true both in the U.S. and in Taiwan.

The preventive activities against venereal disease, mental disease, parasitic disease, and leprosy were also started by the 1930's. For the administration of these activities, a section of preventive hygiene was added to the Health Department of the government-general in 1935. This may be taken as a sign that more emphasis was put on preventive hygiene.

11. Sanitary Facilities and Medical Personnel

Various kinds of basic sanitary facilities such as drainage, water supply, disposal of garbage and night-soil, supervision of slaughter-houses and markets, inspection of food and businesses such as barber shops, restaurants, and hotels were started rather early. These were started in the cities, particularly in the wards of the city which were largely occupied by the Japanese, and gradually extended to wider areas. The establishment of public hospitals and public doctors was also early in time. Naturally, these were established first and foremost for the benefit of the Japanese in Taiwan. Japanese business men in Taiwan had enjoyed various kinds of privileges, Japanese officers received an allowance 60% greater than that of their brothers at home, and all of them could utilize these public facilities. This was the reason why their death rate was not only lower than the death rate of Japan proper, but even comparable to that of the most advanced countries in the world.

Before the Japanese occupation there were a few hospitals operated by Christian missions. Physicians in these hospitals were the only doctors of western medicine, and other physicians were doctors who practiced Chinese medicine. Some Japanese doctors of western medicine came to Taiwan after the occupation, but their number was very small. In response to the urgent need for medical personnel, training classes for doctors and nurses were set up in Taipei Hospital in 1897. The medical training class

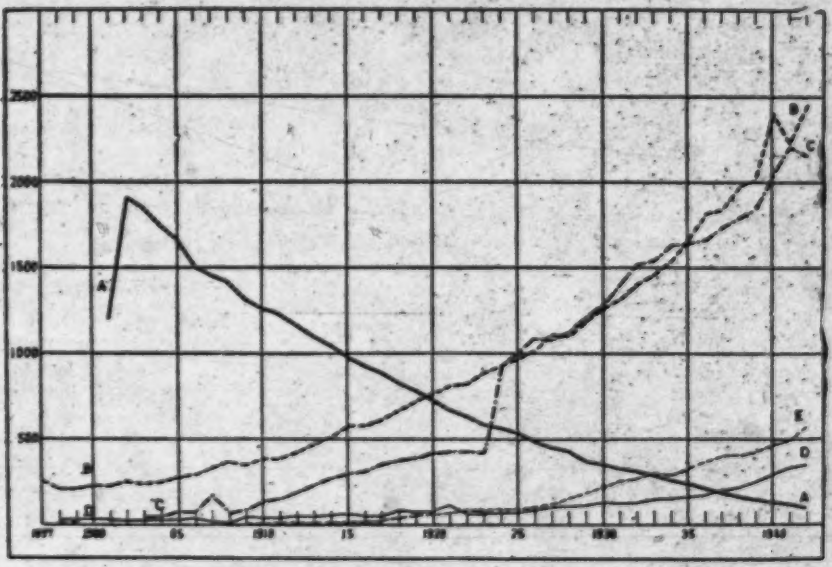
48: Chen E-4 (no date) 1955 AD1 Formosa AD1

was raised to a medical vocational school, to a medical college, and at last became a school of the Taipei Imperial University. Within the 47 years between 1899 and 1945, a total of 2,813 doctors (1,888 Taiwanese doctors and 925 Japanese doctors) were trained by the school.[9]

The trend of change in the number of medical personnel in Taiwan is given in Figure 3. The decrease in the number of doctors of Chinese medicine and the increase of doctors of western medicine is interesting. It is also significant to note that, the number of the latter exceeded the number of the former by 1920. As to the ratio of inhabitants to doctors (of western medicine), the number of inhabitants per doctor was as follows:

years	number of inhabitants per doctor
1897–1906	10,000–12,000
1907–1911	8,000– 9,000
1912–1913	around 7,000
1914–1916	around 6,000
1917–1919	around 5,000
1920–1926	around 4,000
1927–1935	around 3,000
after 1936	around 2,000

Fig. 3 Number of Medical Personnel, Taiwan, 1897-1942



A: Doctors of Chinese Medicine B: Doctors of Western Medicine C: Midwives
D: Pharmacists E: Dentists
Source, 14: Table 484

Note 9: Li Ting-yeh: Part on Sanitation, Manuscript of the History of Taiwan Province, 1952, Taipei, p. 10.

48: Chen E-4 (no date) 1955 AD1 Formosa AD1

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In 1942 there were 2,593 inhabitants per doctor, or 4 doctors per 10,000 inhabitants (computed from 14: Table 484).[9]

12. Transportation

A railroad from Keelung to Hsinchu was already constructed by the Manchurian government. The railroad mileage increased gradually after the Japanese occupation. The main line from Keelung to Kaohsiung was completed by 1908. New branches, double tracks, and sidings were added rapidly, particularly during the 1920's. By 1930, the railroad system of the Japanese era was generally completed. As to passenger traffic, the number of passengers in 1931 was about 21 times of the number of 1901, and between 1931 and 1941 the number of passenger was almost tripled.[10] The mileage of highways was also rose rapidly after the 1920's (14: Table 449). It is interesting to note that, the number of bicycles, automobiles and trucks began to increase after 1920 (Fig. 4, Fig. 5). When bicycles were first imported, people were surprised by their high speed, and thought they were some magical thing. Now they became familiar with them, and utilized them more and more. This is a sign of the change of attitude among the people.

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Before transportation was developed, different localities within an area could not exchange and trade their products, and the failure of crop in one locality would cause local famine. W.S. Thompson, who stayed some months in Nanking, China, in 1930-31, reported: at that time rice was so cheap in Nanking that many farmers were going bankrupt. At the same time people were starving by the hundred of thousands (some say by the millions) in northwest China. There was no means of transportation to let the two embarassed localities help each other, so local famine was inevitable. This situation has been very common in the past. Such prosperous and well-organized countries as England, France, and Sweden had severe local famines from time to time, even during the first half of the nineteenth century (16: pp. 67-68).

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Development of transportation not only can stabilize the living of the people, but at the same time it can significantly influence the extent of the peoples' economic activity and attitudes. When transportation is poor, surplus products of one locality are useless, and people are obliged to live a self-sufficient and closed economic life. Effective transportation can change surplus products into commodities, extending the sphere of economic and social activities. Thus, a self-sufficient and closed society will change into an open, circulating society living by division of labor and exchange. In a closed society, not only are the things produced different, but customs and manners are also different. In an open and circulating society, everything will gradually become uniform through continual contact and communication. In the vital statistics of Taiwan we can see a reflection of this change. During the early years of Japanese occupation

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Note 9: As to the situation of medical facilities in 1945, see Li, Ting-yeh: op. cit. 12. As to the comparison of the situation of Taiwan with other parts of the world, cf. 27: Table 120.

Note 10: Tang, C.W.: "Railways in Taiwan". Chinese-American Economic Cooperation, Vol. 1, No. 5, 1952, Taipei, p. 65.

48: Chen E-4 (no date) 1955 ADI Formosa ADI

matters of sanitation, and at times on matters of agriculture. With the passage of time, experience lead them to compare their traditional way of life with that imposed by the colonial government. Some of these ways were found to be not too bad, some even adoptable. This kind of change in attitude through hard experience was fairly significant. By this, people realized for the first time that there were another ways of life besides their traditional one, and that some elements were worthy of adoption. Once the people began to adopt the new way of life, change began to speed up. From the following instances we can see that change in the attitude of people became conspicuous after the 1920's. We have discussed the influence of war and peace, the prevalence of epidemics, and the development of transportation on the attitude of the people (§ 7, 8, 12). Here the change of attitude concerning medical treatment and agriculture will be discussed.

Since treatment of illness touches the innermost part of life, it is only natural that conservative people do not dare to allow an unfamiliar doctor with strange ways of treatment to approach them. For Taiwanese, who had been accustomed to the traditional Chinese medicine and folk medicine, doctors of western medicine, particularly with their injections and operations, were dreaded. During the early years of the Japanese rule there was a prevalence of cholera. Colonial officers compelled the people to take the preventive injection. Great consternation arose among the people, and many of them, particularly young girls, escaped and hid, in order not to have the dreaded injection. In the old city of Tainan a young girl of a wealthy family was escaping in a palanquin, but unfortunately she was caught by a Japanese police on the way, and forced to take the injection. Perhaps because the shock was too great, she died in a short time. Another young girl who took the injection killed herself after she went home, because it was a dreadful shame for a young girl of high standing to expose a part of her body to the public gaze. When a person died, his family had to have a medical certificate in order to get permission for burial. In 1906 90% of the medical certificates were issued by doctors of Chinese medicine, and certificates issued by doctors of western medicine constituted only 10% of the total. The proportion of the latter increased gradually, attained to 45% by 1917 (11:1917, p. 29). By 1920, the number of doctors of western medicine already exceeded those of Chinese medicine, and by 1935, 90% of medical certificates for the dead were issued by doctors of western medicine. Thirty years after 1906, doctors of Chinese medicine and doctors of western medicine had changed positions completely. By 1935, people did not object to injections and operations any more. On the contrary, they even believed blindly in injections, and asked for an injection when they saw a doctor. This was a remarkable change in attitude.

Farmers are tenaciously conservative in their work. In Taiwan, farmers originally used only compost and night-soil, and did not use any commercial fertilizer. When a sugar corporation started to promote the cultivation of sugar cane, they bought commercial fertilizer from Japan, and distributed it free of charge to farmers. Once a

1:Gallin E-4,5 (1957-1958) 1966
AD5 Taiwan Hokkien AD5
Taiwan AD6
Formosa AD1

the rural people. Some forms of improved sanitation reached the rural areas through the schools and, perhaps more effectively, through the publishing of government edicts enforcing practices of sanitation. Semiannual government inspections forced villagers to clean up their houses and the villages twice a year. The inspections were carried out by the Japanese police and civil officials, and any family which did not pass the inspection was subject to fine and to reinspection, which meant that "the party was punished by having to clean up all over again." The policy of inspections instituted by the Japanese has been continued under the Nationalist Chinese regime.

During the latter part of the war, and especially after the restoration of Chinese rule to Taiwan, there was a marked increase in the incidence of disease, particularly communicable diseases. There was even a recurrence of cholera. This was a direct result of the poor living conditions brought about by the war and, with the coming of the Chinese government, a chaotic administration which was unable or unwilling to deal with health problems. However, the situation gradually began to improve after 1948 and 1949 when Taiwan became the new stronghold of the Nationalist Chinese regime. This improvement is evidenced by the general situation in the Hsin Hsing area. Beginning in the early 1950's the number of Western-style doctors practicing in the area increased. At this date, there are a number of such doctors, and the villagers consider their fees reasonable and within their means. The reason for this great increase lies in the different licensing practices of the Japanese and the Nationalist governments. Under the Japanese a man had to be a graduate of a medical school before he could practice medicine; under the Chinese government, the applicant is required only to pass a practical examination. This means that people who have worked in hospitals as aides or technicians and have had some opportunity to observe others practicing medicine may have accumulated enough knowledge to pass the examination and obtain a license. Therefore, while there are now a large number of licensed doctors practicing in the Hsin Hsing area, only a few who went to school in Japan have had formal medical training.

In addition to the great increase in the number of doctors practicing in the local area, in recent years there has also been a marked expansion in the number of private and public hospitals in the cities. These hospitals, which are sometimes very large, can accommodate many patients, house relatively modern facilities such as operating rooms, X-ray and other equipment, and provide modern drugs for patients. Although most of the patients treated in these hospitals are city people, village people sometimes go to them for treatment. They are usually referred there by a local doctor who is capable of diagnosing an illness as one requiring hospital care or who is honest enough to